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A NEW *TRITNEPTIS*, WITH A REVISED KEY TO THE NEARCTIC SPECIES OF THE GENUS (HYMENOPTERA: PTEROMALIDAE)

By B. D. Burks

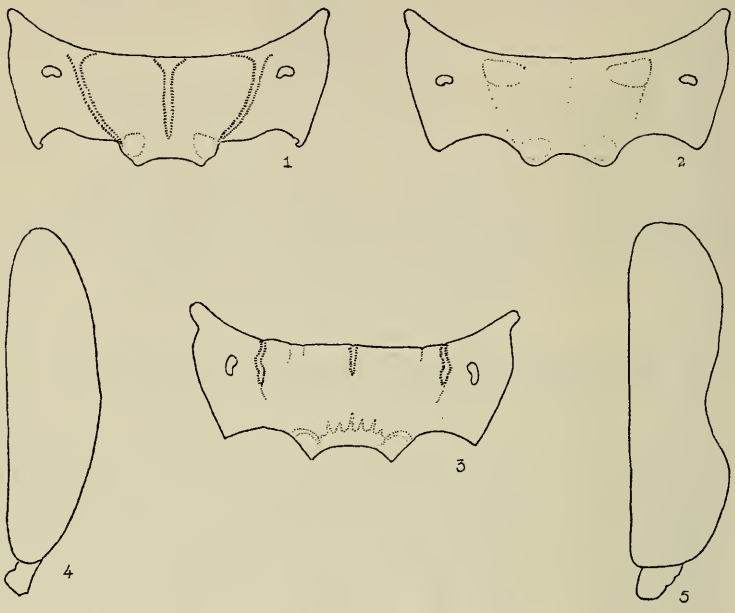
Systematic Entomology Laboratory, Entomology Research Division, Agr. Res. Serv., USDA[1]

In 1908 A. A. Girault published a lengthy description of his new genus *Tritneptis* and designated *T. hemerocampae* Girault, new species, as type-species. This type-species had been reared from *Hemerocampa leucostigma* S. and A. infesting shade trees in Chicago, Illinois. Sixteen years later (Girault, 1924), in the middle of a paper on Australian chalcidflies, he inserted the statement, "*Tritneptis hemerocampae* Girault. This is a synonym of *Dibrachys boucheanus* Ratz." Inasmuch as *boucheanus* is type-species of the genus *Dibrachys* Foerster, 1856, this synonymized *Tritneptis* under *Dibrachys.*

In 1938, however, A. B. Gahan restudied these species, and he showed that the synonymy Girault had published 14 years earlier was incorrect. *D. boucheanus* and *T. hemerocampae* were not synonymous nor even congeneric. Consequently he resurrected the genus *Tritneptis*, gave some brief comments about its characters, and keyed out the 5 species he referred to it. Two years later he received for identification a long series of another, undescribed species of *Tritneptis.* He set this species aside in the collection to be described at some future time.

This undescribed species has remained in the USNM collection for the ensuing 30 years, during which period of time additional specimens of it have been received fairly regularly

[1] Mail address: Systematic Entomology Laboratory, USDA, c/o U.S. National Museum, Washington, D.C. 20560.



FIGS. 1–5. Nearctic *Tritneptis*. 1, propodeum of *T. koebelei*; 2, propodeum of *T. klugii*; 3, propodeum of *T. doris*. 4, male antennal scape of *T. klugii*; 5, male antennal scape of *T. doris*.

for identification—I describe it in this paper. I also present a revised key to the Nearctic species of the genus *Tritneptis* and a recharacterization of the genus.

Tritneptis Girault

Tritneptis Girault, 1908, Psyche, 15: 92. Gahan, 1938, Proc. Entomol. Soc. Wash., 40: 213. Graham, 1969, Bul. Brit. Mus. (Nat. Hist.) Entomol., Suppl. 16, p. 801.

Type-species: Tritneptis hemerocampae Girault, by original designation.

Generic description: Head slightly broader than thorax at tegulae; vertex relatively broad, length of head at meson in dorsal aspect from ⅓ to ⅕ as great as its width; occiput not margined; antennae inserted slightly below level of ventral margins of compound eyes, apex of scape not quite reaching level of anterior ocellus; pedicel long, longer than any funicular segment and usually equal to club; 2 ring segments present, 6 funicular segments present, the first usually slightly the longest; face strongly receding below antennal bases, forming angles of 90 to 115

degrees with posterior margin of compound eye; mandibles symmetrical, each with 4 teeth; clypeal margin straight or with obscure, toothlike projections. Pronotum anteriorly ecarinate; notaulices incomplete posteriorly; forewing with margin vein 1½ to 3 times as long as stigmal vein, postmarginal and stigmal veins almost or quite equal in length; hind tibia with one apical spur; each tarsus with 5 segments. Propodeum strongly sculptured, with or without median carina, lateral carinae present or absent; apical neck absent or poorly developed. Gaster sessile, subequal in length to thorax and propodeum combined, subrectangular in shape. Male with antennal scape and legs stouter than in female; funicular segments shorter than in female; gaster slightly shorter than in female. Males usually greatly in the minority in reared series.

Key to Females

1. Forewing shaded with brown over most of its disc; dorsum of thorax with strong, minute, alveolate sculpture, color deep metallic blue, not shining; propodeum dark purple; marginal vein 3 times as long as stigmal ..... *scutellata* (Muesebeck)
   Forewing hyaline; dorsum of thorax black, more or less shining and with weak sculpture, sometimes with faint metallic brassy luster; propodeum not purple; marginal vein not more than 2 times as long as stigmal 2
2. Lateral carinae of propodeum complete and sharply defined, fig. 1 ..... *koebelei* Gahan
   Lateral carinae of propodeum incomplete, fig. 3, or not sharply defined, fig. 2 3
3. Head in lateral aspect with face entirely ventral, forming a 90 degree angle with posterior margin of compound eye; sculpture of dorsum of thorax extremely weak, surface almost smooth 4
   Head in lateral aspect with face not entirely ventral, forming more than a 90 degree angle with posterior margin of compound eye; dorsum of thorax with distinct, though shallow, sculpture 5
4. Forewing with short marginal cilia on apical and hind margins; dorsum of thorax moderately shining and black ... *klugii* (Ratzeburg)
   Forewing without marginal cilia; dorsum of thorax black with faint metallic brassy luster ..... *doris* new species
5. Pedicel 3 times as long as greatest width; basal cell of forewing bare ..... *hemerocampae* (Girault)
   Pedicel 2 times as long as greatest width; basal cell of forewing with numerous weak cilia ..... *diprionis* Gahan

Tritneptis doris new species

This species agrees with *klugii* (Ratzeburg) in having the face entirely ventral, lying at a right angle to the posterior margin of the compound eye, and in having the dorsum of the thorax very shallowly sculptured and shining. The two differ in that the forewing of *klugii* has a distinct fringe of short cilia at its apical and posterior margins, while the margins

of the forewing in *doris* are bare; the thoracic notum of the female of *klugii* is shining black, but in *doris* it has a distinct metallic brassy luster; the male antennal scape in *klugii* is enlarged, but it is not angularly produced near the base, fig. 4, as it is in *doris*, fig. 5.

Female: Length, 2.0–2.8 mm. Head dull black, thorax black with faint metallic brassy luster, propodeum dull black, gaster dark tan to black; antennal scape, pedicel, ring segments, and all legs beyond coxae, deep yellow to tan; antennal funiculus and club, wing veins, and mandibles, brown; venter of gaster at base may be yellow in some specimens, and propodeum has faint bluish tint in a few specimens. Head closely and finely reticulated; thorax slightly shining, with very shallow sculpture on dorsum; propodeum strongly shagreened; gaster smooth, shining.

Head in dorsal aspect 5 times as wide as long at meson; face entirely ventral, lying at a 90 degree angle to the posterior margin of the compound eye. Malar furrow absent; length of malar space ½ eye height. Ocellocular line ⅗ as long as postocellar line. Eyes bare. Relative lengths of parts of antenna: scape, 25; pedicel, 10; first funicular segment, 5; second to sixth segments, 4 each; club, 10. Mandible with 4 teeth, 2 acute ventral teeth, third tooth subacute, dorsal tooth blunt.

Forewing without fringe of marginal cilia; marginal vein twice as long as stigmal, postmarginal and stigmal veins equal in length; submarginal vein with 11–13 dorsal bristles; basal cell bare. Hindwing with marginal cilia; one straight and 2 recurved hamuli present. Pronotum and mesonotum sparsely setose, mesoscutellum setose only at lateral margins. Prepectus faintly sculptured, almost smooth; mesopleuron and metapleuron with strong, semi-alveolate sculpture except for smooth area just ventral to base of forewing. Femora inflated, at widest point, fore femur ¼ as wide as long, mid femur ⅕ as wide as long, hind femur ⅓ as wide as long.

Propodeum strongly shagreened; median longitudinal carina present and complete, incomplete, or almost absent; lateral carinae present anteriorly, absent posteriorly; areas lateral to spiracles with relatively sparse, long hair. Gaster subequal in length to thorax and propodeum combined.

Male: Length, 1.5–2.3 mm. Head dark with faint metallic green luster; thorax black with faint metallic blue luster on pronotum and mesoscutum, mesoscutellum with bronzy luster; propodeum dark with metallic blue luster; gaster dark brown with faint metallic blue luster visible at base and apex; antennae yellow to tan; femora light brown basally, shading to yellow at apices; tibiae yellow, usually shading to tan at apices; tarsi and wing veins yellow.

Antennal scape enlarged, fig. 5, angularly produced near base; relative lengths of parts of antenna: scape, 18; pedicel, 5; first to sixth funicular segments, 2 each; club, 8. Ocellocular line ⅔ as long as postocellar line. Face not entirely ventral, lying at a 110 degree angle to posterior margin of compound eye. Hind tibia enlarged toward apex, much stouter than in female; tarsi shorter than in female. Gaster slightly shorter than in female.

Type-locality: Upton, Wyoming.

Holotype: Female, USNM no. 71046.

Described from 96 female and 7 male specimens. Holotype, allotype, 86 female and 4 male paratypes from Upton, Wyoming, reared 21 June 1940, from pupae of *Coloradia doris* Barnes (Lepidoptera, Saturniidae), larvae of which fed on *Pinus ponderosa* N. D. Wygant, Hopkins no. 31406-N-1; 9 female, 2 male paratypes, from 10 miles west of Wales, Utah, 13–18 August 1969, reared from *Hemileuca* sp. (Lepidoptera, Saturniidae), pupae from soil beneath *Symphoricarpos* D. R. Christensen, Hopkins no. 53525-B.

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